

REMARKS

Claims 1-49 are currently pending in the application. The Examiner rejected claims 1-49 under 35 U.S.C. 103(a) as being unpatentable over "Data-Over-Cable Service Interface Specifications" by Cable Television Laboratories, Inc. (DOCSIS) in view of US Patent No. 6,643,295 (Nose). Independent claims 1, 17, 34, 43, and 48 have been amended to recite "wherein newly introduced nodes are operable to drop MAP messages having an optimized lookahead time and respond to MAP messages having a relaxed lookahead time." No new search is believed necessary.

Applicants believe that the independent claims are allowable over the cited art in their present form even without any amendments. More specifically, the Examiner argued that it would be obvious to periodically switch between using an optimized LAT and a relaxed LAT. The Applicants respectfully disagree, even if there is sufficient motivation to combine the DOCSIS and Nose references, the combination does not teach or suggest all of the elements of the claims. DOCSIS only describe a conventional initial ranging procedure. Nose only describes updating transmission delay upon broadcasting MAP message including initial-ranging data. However, this is not the same as switching between an optimized LAT and a relaxed LAT.

The Examiner cited Figure 10 in Nose. Figure 10 in Nose describes the following:

STEP 11: START TIMER AND BROADCAST MAP INCLUDING INITIAL-RANGING DATA
STEP 12: RECEIVE INITIAL-RANGING PACKET FROM CORRESPONDING TERMINALS
STEP 13: CALCULATE TRANSMISSION DELAY
etc.

That is, Nose receives an initial-ranging packet from corresponding terminals after it has broadcast the MAP message. After it receives the initial-ranging, it then proceeds to calculate transmission delay. By contrast, the techniques of the present invention recognize that in some instances, a node such as a cable modem may not even respond to a MAP message.

As noted on page 21, lines 3-13 of the present application "Thus, a situation could arise

where the LAT value for the upstream channel is less than the overall delay associated with generating, transmitting, and processing a MAP message at the new cable modem. Accordingly, in this situation, the new cable modem may receive MAP messages which have expired start allocation times. Since conventional cable modems are configured to discard MAP messages which have an expired start allocation time, the new cable modem will be unable to access the CMTS via the upstream channel since, in order to gain access to the CMTS, the new cable modem must receive a valid MAP message (having a non-expired start allocation time) which includes an initial ranging slot allocation. Thus, if the new cable modem is unable to perform an initial ranging procedure with the CMTS, it will be unable to access the Head End using this upstream channel."

Both the DOCSIS and the Nose references assume that a MAP message is broadcast and responded to. Both the DOCSIS and the Nose references assume that initial ranging can occur after the MAP message is sent. However, the techniques of the present invention recognize that new cable modems will sometimes drop MAP messages. The techniques of the present invention recognize that if MAP messages are dropped, initial ranging may not occur at all. This scenario is not contemplated in DOCSIS nor Nose.

Consequently, the independent claims in unamended form recite an optimal lookahead time and a relaxed lookahead time. Conventional implementations described in DOCSIS and Nose do not teach or suggest any relaxed lookahead time. An updated transmission delay is not a relaxed lookahead time. According to various embodiments, the relaxed lookahead time prevents dropping of MAP messages.

Nonetheless, to facilitate prosecution, the independent claims have been amended to recite "wherein newly introduced nodes are operable to drop MAP messages having an optimized lookahead time and respond to MAP messages having a relaxed lookahead time." Neither DOCSIS nor Nose teach or suggest or even contemplate this recitation.

In view of the foregoing, Applicants believe all rejections to the independent claims have been overcome thereby placing all independent and dependent claims now pending in this application in condition for allowance. If the Examiner believes a telephone conference would

expedite prosecution of this application, please telephone the undersigned at the number provided below.

Respectfully submitted,

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